United States Department of the Interior

U.S. GEOLOGICAL SURVEY
Water Resources Division
Iowa District
P.O. Box 1230
Iowa City, Iowa 52244

July 17, 1995

Don Lininger
U. S. Environmental Protection Agency
Region VII
RCRA-Iowa Section
726 Minnesota Avenue
Kansas City, Kansas 66101

Re: **Oversight Supervision/Split Sample Collection Activities**
Closure of Three Hazardous-Waste Container Storage Units
General Electric Company
West Burlington, IA
EPA RCRA ID #IAD005272703

Trip Report

Dear Don:

This document comprises the Trip Report, **Oversight Supervision/Split Sample Collection Activities during Closure of Three Hazardous-Waste Container Storage Units, the General Electric Company, West Burlington, Iowa (EPA RCRA ID #IAD005272703,** prepared by James P. Caldwell, Hydrologist, U.S. Geological Survey-Water Resources Division. Please call if you have any questions regarding the referenced report.

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Sincerely,

Jim Caldwell
Hydrologist, USGS

Oversight Supervision/Split Sample Collection Activities:
Closure of Three Hazardous-Waste Container Storage Units; General Electric Co.
West Burlington, IA (EPA-RCRA ID #IAD005272703)

Organization of Information in Trip Report

INTRODUCTION

General Electric Company (GE) operates a facility which manufactures electric switchgear equipment at 510 East Agency Road, West Burlington, Iowa (figure 1). Wastes generated at this facility result from electroplating, painting, and degreasing operations conducted at the site.

Three areas of the facility, previously used to store hazardous materials/hazardous waste, will be clean closed in accordance with an EPA-approved Closure Plan (Montgomery-Watson, September, 1994). These areas are (figure 2): 1) the "Big" Hazardous Materials Storage Building ("Big Building"); 2) the Outdoor Storage Rack Area; 3) the Safety Building.

Closure (decontamination) requirements for each of these areas, delineated in the EPA-approved Closure Plan, are excerpted in Appendix A. General Electric is required to collect/analyze samples of decontamination and rinse waters during closure activities to determine if target clean-up objectives have been met.

Environmental representatives of G.E. (Montgomery-Watson, Des Moines, Iowa) conducted decontamination/closure activities at the referenced facility during the week of April 17, 1995. Decontamination and rinse-water samples were collected for chemical analysis from the three storage areas on April 19, 1995.

Purpose and Scope

The U.S. Geological Survey (USGS), under Interagency Agreement Number DW14952062 01 0 with the EPA Region VII-RCRA Branch, provided oversight supervision at G.E. on April 19, 1995, during selected closure activities. In addition, the USGS collected split rinse-water samples in order to verify the validity of the analytical results obtained by the facility's environmental representative.

This report provides a summary of closure activities conducted by Montgomery-Watson and observed by the USGS. The results of the chemical analyses of the split samples collected by the USGS are included in the appendix of the report. Copies of the EPA field documents, and photographs of selected field activities are also included in the appendices of the report.

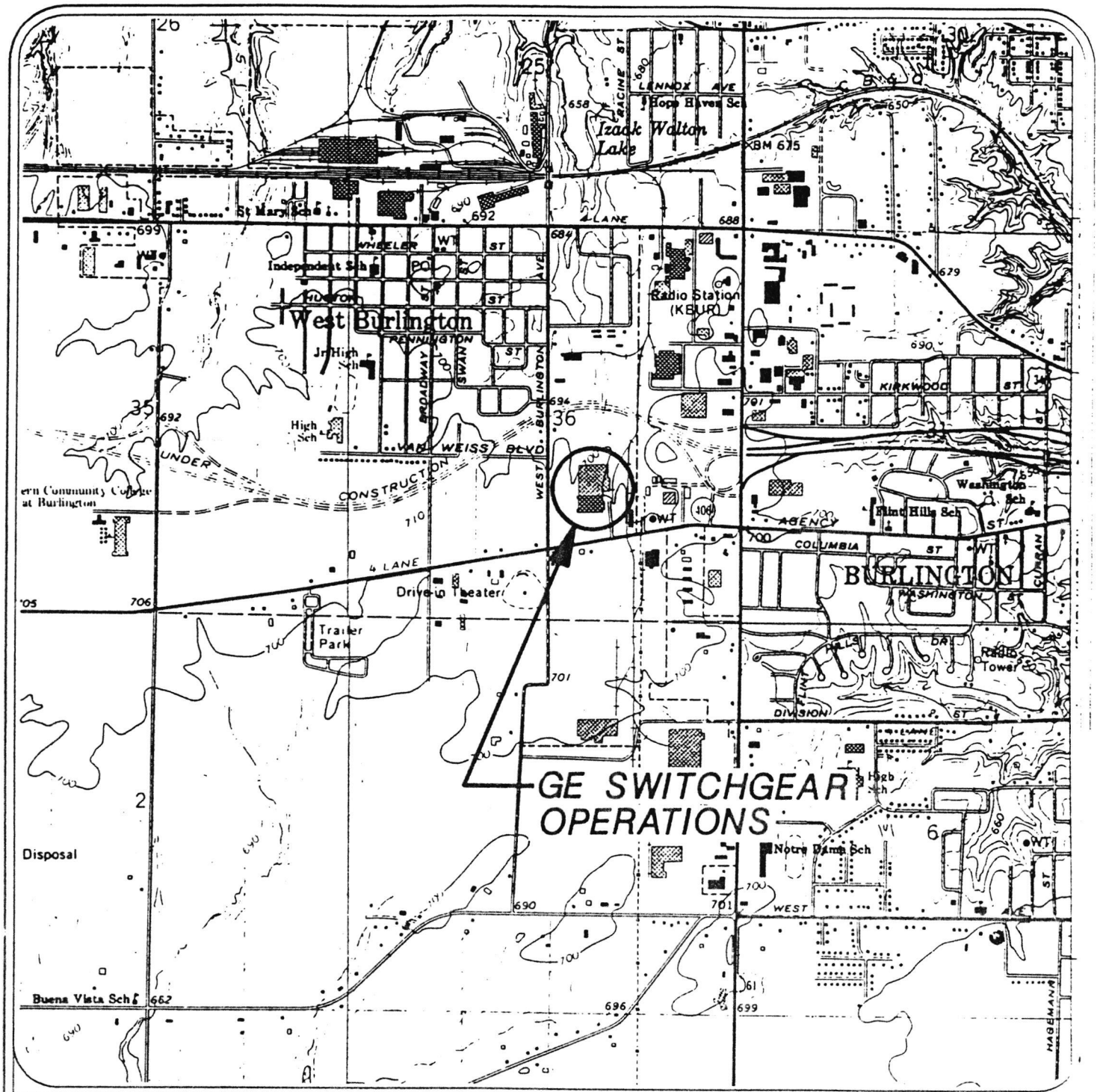
Facility Description

The G.E. facility, located southeast of West Burlington, Iowa (figure 1), is in an area zoned for industrial and commercial use. Iowa State Highway 406 is along the south property boundary. Waste management/storage units scheduled for closure include:

1) The "Big" Hazardous Materials Storage Building (also referred to as the "Big" Building);
(wastes managed include silver cyanide electroplating solution and electroplating sludge)

2) The Outdoor Storage Rack Area;
(wastes managed include paint sludge, paint filters, paint-booth filters, organic solvents, freon)

3) The Safety Building;
(wastes managed include paint sludge, paint filters, silver cyanide electroplating solution)



MAP SOURCE: U.S.G.S. TOPOGRAPHIC QUADRANGLES. WEST BURLINGTON, IOWA.

SITE LOCATION: SEC. 36, T. 70N., R. 3W., DES MOINES COUNTY.

N

0 2000

SCALE IN FEET

Figure 1

GENERAL ELECTRIC COMPANY
GE SWITCHGEAR OPERATION
WEST BURLINGTON, IOWA

MONTGOMERY WATSON

SITE LOCATION MAP

Refer to figure 2 for the general layout of the facility. The three waste management units are located immediately east of the main plant building. Hazardous wastes that have been managed in the referenced units are summarized in Table 1. The primary constituents of these wastes are also listed in Table 1.

Closure Activities

The EPA-approved Closure Plan (Montgomery-Watson, September, 1994) provides decontamination requirements/procedures as well as closure performance standards (clean-up objectives) for each of the referenced waste-management units (Appendix A). These performance standards are designed to minimize the need for future maintainence of the former waste-management units and to minimize or eliminate the release of hazardous-waste constituents to the atmosphere as well as ground- and surface-water resources.

Summary of decontamination activities:

- **"Big" Building:**

a) Decontaminate two metal shelving units used for storage of electroplating sludge and cyanide electroplating waste (by high-pressure wash and rinse);

b) Sweep, then decontaminate (by high-pressure wash and rinse) the concrete floor beneath the metal shelving units;

c) Vacuum collect and containerize all decontamination and rinse water for disposal according to the EPA-approved Closure Plan.

- **Outdoor Storage Rack Area:**

a) Sweep, then decontaminate (by high-pressure wash and rinse) the concrete floor underneath the storage racks.

b) Vacuum collect and containerize all decontamination and rinse water for disposal according to the EPA-approved Closure Plan.

- **Safety Building:**

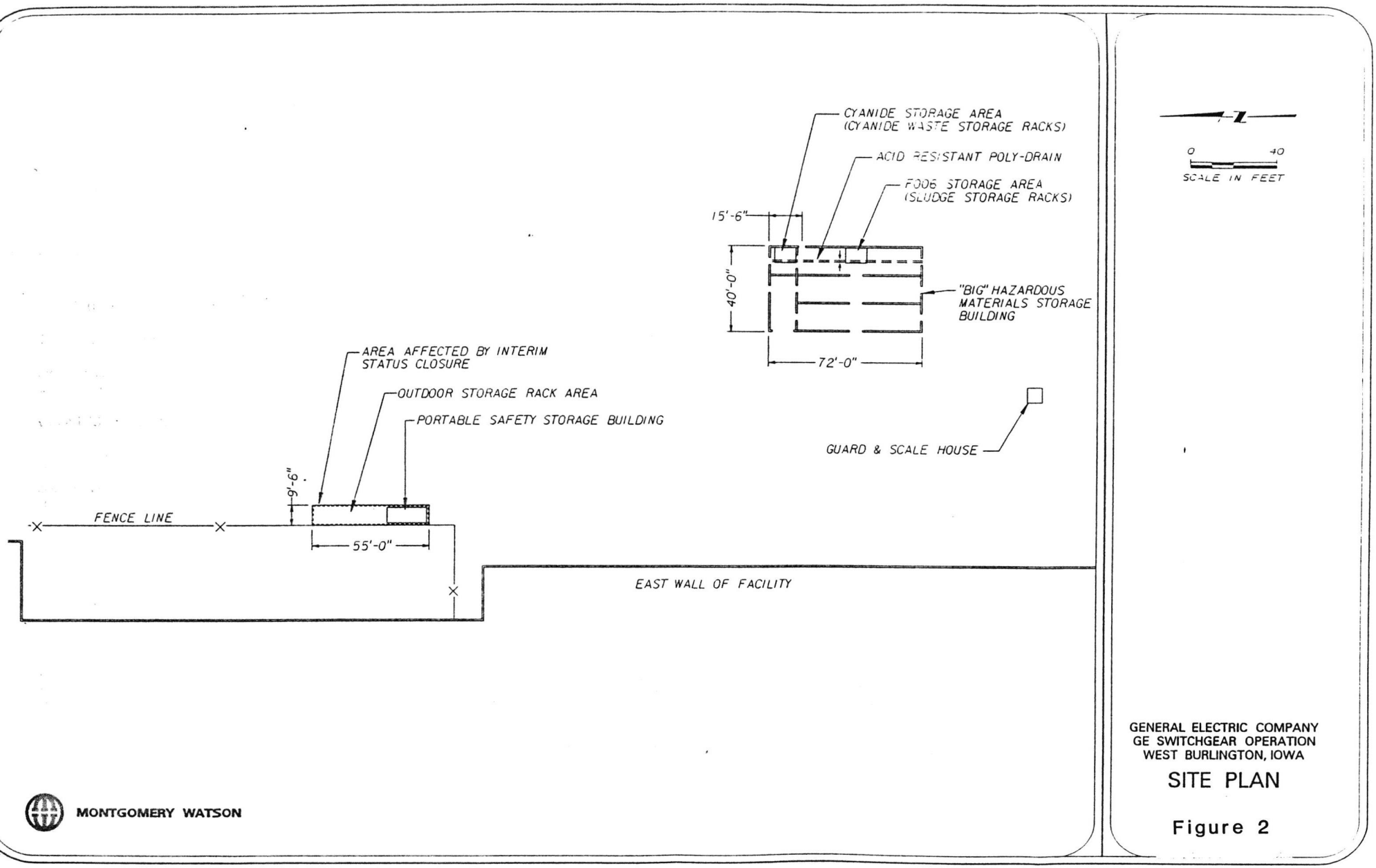
a) Sweep the plywood flooring planks (false floor) to remove loose debris (containerize sweepings per EPA-approved Closure Plan requirements);

b) Decontaminate plywood flooring (by high-pressure wash and rinse).

c) Remove plywood flooring planks to provide access to steel subfloor of building; decontaminate steel subfloor and steel walls/ceiling of building by high-pressure wash and rinse.

Collect/containerize all decontamination and rinse water for disposal according to the EPA-approved Closure Plan.

Note: samples of decontamination rinsewater will be collected for chemical analysis from all waste-management units to determine if target clean-up objectives have been met.



MONTGOMERY WATSON

GENERAL ELECTRIC COMPANY
GE SWITCHGEAR OPERATION
WEST BURLINGTON, IOWA

SITE PLAN

Figure 2

Closure Activity Oversight Supervision

Jim Caldwell, USGS hydrologist, observed selected closure activities at the G.E. facility on April 19, 1995 at the request of Don Lininger, EPA-RCRA Region VII Project Manager. Field oversight activities included observing decontamination activities ot the 3 referenced WMUs and collection of decontamination rinsewater samples by the facility's environmental representatives. In addition, the USGS collected split samples of decontamination rinsewater from the Outdoor Storage Rack Area and the Portable Safety Building in order to verify the validity of the analytical results obtained by the facility's environmental representative.

The following individuals were present during the closure activities:

Representing General Electric:

Max Pickle, Health and Safety Manager

Eric Rankin, Health and Safety Engineer

Representing Montgomery-Watson Environmental Consultants:

Terry Noteboom, Project Manager

Lisa Larson, Staff Engineer

Representing J&R Drilling Services

Bruce Driller

Don Helper

Representing the Environmental Protection Agency:

Jim Caldwell, Hydrologist, USGS

Weather conditions during the oversight activities were pleasant.; partly cloudy skies, slight to moderate breeze, temperatures ranged from 40-50 degrees Fahrenheit.

Split-Sample Collection Field Activities

The EPA-approved Oversight Sampling Plan (Appendix A) provides details of the split-sampling requirements for the site investigation. Table 1 summarizes the parameter and analytical requirements for the split decontamination rinsewater sampling activities.

Table 1: Parameter and Analytical Requirements; Split Decon Rinsewater Sampling Activities

Sample Location	Number of Samples	Matrix	Constituents (see sampling plan for complete list)	Analytical Method, SW-846
Outdoor Storage Rack Area	1sample and 1 duplicate	Water	Lead, Cadmium, Chromium, Silver Cyanide VOCs	6010 9010 8260
Portable Safety Building	1	Water	Same as above	Same as above
Trip Blank	1	Water	VOCs	8260

SUMMARY

No significant deviations from standard sample collection and preservation protocol (by the facility's environmental representative) were observed during the time the USGS was present at the site. The USGS collected 2 decontamination rinsewater split samples, one duplicate split decontamination rinsewater sample, one trip blank, and one equipment blank. Note: the equipment blank was not on the sampling schedule--collected at the request of T. Noteboom, Mongomery-Watson). The equipment blank was collected from a distilled/deionized water rinse of one of the 55-gallon drums used at the site to containerize decontamination fluids. All split samples were containerized and labeled according to specifications outlined in the Oversight Sampling Plan. The samples were shipped by Jim Caldwell, USGS, to the EPA Region VII Laboratory in Kansas City, Kansas for analysis.

Closure documentation requirements for this activity are included in Appendix A. Appendix B of this report is the EPA-RCRA Sampling Plan. Appendix C contains photographs of selected activities taken during the field investigation oversight supervision. Appendix D contains photocopies of the EPA field sheets. Appendix E contains the analytical results from the EPA Laboratory of the split decontamination rinsewater samples.

Appendix A
Closure Plan
(with)
EPA-Approved
Closure Documentation Requirements

INFORMATION FOR CLOSURE OF THREE CONTAINER STORAGE UNITS

GENERAL ELECTRIC COMPANY
WEST BURLINGTON, IOWA
EPA RCRA ID # IAD005272703

PUBLIC COMMENT PERIOD
OCTOBER 26, 1994 - NOVEMBER 25, 1994

US ENVIRONMENTAL PROTECTION AGENCY
REGION 7 - KANSAS CITY, KANSAS
CONTACT: DON LININGER (913) 551-7724

CLOSURE SUMMARY

Facility Name: General Electric Company

Facility Address: 510 East Agency Road
West Burlington, Iowa 52655

EPA RCRA ID Number: IAD005272703

Facility Point of Contact: Eric Rankin
319-753-8400

Unit(s) Undergoing Closure: 3 container storage units

Wastes Managed in Unit(s): D001, D008, D011, F006, F007, F008

Closure Activities: Closure involves decontaminating the 3 container storage units to ensure that the clean-up objectives identified below are achieved.

Clean-up Objectives:

HAZARDOUS CONSTITUENT	RINSEWATER, mg/l
Lead	0.05
Cyanide	0.7
Silver	0.2
Cadmium	0.01
Chromium	0.1
Xylenes	70.0
Ethylbenzene	4.0
Methyl Ethyl Ketone	2.0
Methyl Isobutyl Ketone	2.0
Toluene	10.0
1,1,1 - Trichloroethane	0.2
1,1,2 - Trichloro- 1,2,2 - Trifluoroethane	0.001
Benzene	0.005

Public Notice Period: From October 26, 1994 to November 25, 1994

CLOSURE PLAN

FOR

FORMER HAZARDOUS WASTE CONTAINER STORAGE AREAS

Prepared for

GENERAL ELECTRIC DISTRIBUTION AND CONTROL
GENERAL ELECTRIC COMPANY
WEST BURLINGTON, IOWA

RECEIVED
SEP 26 1994
IOWA SECTION

Project No. 3286.0020

September 1994

Prepared by

Montgomery Watson
11107 Aurora Avenue
Des Moines, Iowa 50322
515-253-0830

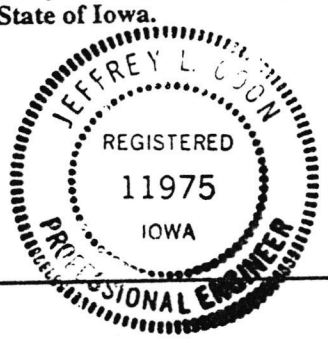
I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly Registered Professional Engineer under the laws of the State of Iowa.

Signature: _____

Name: Jeffrey L. Coon, P.E.

Date: 9-1-94 Reg. No. 11975

My registration expires December 31, 1995.



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SECTION 1

GENERAL INFORMATION

OBJECTIVE

General Electric Company (GE) has a distribution and control facility which manufactures switchgear equipment. The facility is located at 510 East Agency Road, West Burlington, Iowa (shown in Figure 1-1). Wastes generated at this facility result from electroplating, degreasing and painting operations conducted at the site.

Under paragraph 12(a) of the Consent Agreement and Consent Order executed by GE and the U.S. Environmental Protection Agency (EPA), Region VII (Docket No. VII-93-H-0014, effective August 6, 1994), GE is required to submit a Closure Plan for the "Big" Hazardous Materials Storage Building ("Big" Building) which meets the standards of 40 CFR Part 265, Subpart G. The EPA has also requested that a Closure Plan be submitted for two additional storage areas which were the subject of RCRA Part B documentation. The two additional areas, an Outdoor Storage Rack Area and Safety Building, are under Interim Status.

The purpose of this document is to serve as a Closure Plan for the "Big" Building, the Outdoor Storage Rack Area and Safety Building referenced in the RCRA Part B documentation.

WASTE CHARACTERISTICS

Hazardous wastes that have been managed in the container storage areas are summarized in Table 1-1. The primary constituents of the wastes are also included in Table 1-1 to minimize sample analysis activities.

EXISTING CONDITIONS

The original storage system, used until 1989, consisted of a series of metal storage racks. Drip pans and saddles were located under the racks to contain spillage and precipitation. The pans were occasionally emptied and the contents containerized and manifested for off-site disposal. According to company records, the pans neither overflowed nor allowed potentially hazardous waste or precipitation to come in contact with the underlying concrete surface. Under the original RCRA Part A documentation, the hazardous waste storage area had the capacity for 44, 55-gallon drums. The Part A documentation was revised in 1982 to increase the storage capacity to one hundred, 55-gallon drums. In 1989, a specially designed Safety Building (constructed of steel and moveable), with secondary containment, was placed adjacent to the Outdoor Storage Rack Area. The Safety Building was used as an accumulation area where hazardous waste would be stored for no longer than 90 days. Once use of the Safety Building was implemented, Part A documentation was revised, and Part B documentation was written as the storage capacity decreased to 24, 55-gallon drums. At this time, the "Big" Building also became a part of the hazardous waste storage system. Figure 1-2 illustrates the size and location of the former storage areas.

TABLE 1-1

WASTE CHARACTERISTICS

Waste Managed	Waste Constituents	40 CFR 261 Waste Code
"Big" Building		
• Silver Cyanide Bath, Sludge, Solids, Noncyanide Silver Bath	Cyanide, Silver	F006, F007, F008, D011
Outdoor Storage Rack Area		
• Paint Sludge, Filters	NA	D001
• Dry Booth Filters, Sludge, Masking, Thinners	Lead, Xylenes, Ethylbenzene, Methyl Ethyl Ketone, Methyl Isobutyl Ketone, Toluene	D001, D008, F003, F005
• Spent Degreasing Solvent	1,1,1-Trichloroethane	F001
• Spent Freon Solvent	1,1,2-Trichloro-1,2,2-Trifluoroethane	F002
Safety Building		
• Paint Sludge, Filters	NA	D001
• Dry Booth Filters, Sludge, Masking, Thinners	Lead, Xylenes, Ethylbenzene, Methyl Ethyl Ketone, Methyl Isobutyl Ketone, Toluene	D001, D008, F003, F005
• Silver Cyanide Bath, Sludge, Solids, Noncyanide Silver Bath	Cyanide, Silver	F006, F007, F008, D011

NA = Not Applicable

The "Big" Building is currently used to house hazardous waste. The concrete floor is in good condition, and there is no physical evidence to indicate any release of waste has occurred. Wastes currently stored in the "Big" Building are managed off site at Clean Harbors in Chicago, Illinois, with the exception of cyanide wastes-which are recycled by RFE and Cyanochem, and electroplating sludge which is recycled by Encycle.

Currently, there is no physical evidence to indicated any release of waste has occurred. Since 1989, the original Outdoor Storage Rack Area has not been used to store hazardous waste containers, and the concrete pad located underneath the storage racks is in good condition. The Safety Building and Outdoor Storage Rack Area, subject of the RCRA Part B Application, have been under Interim Status, and no waste is currently being stored in the building. Wastes formerly stored in these areas were managed off site at Clean Harbors in Chicago, Illinois, with the exception of cyanide wastes which were recycled by RFE and Cyanochem, and electroplating sludge which was recycled by Encycle.

MAXIMUM WASTE INVENTORY

The maximum waste volume in storage at any one time during the lifetime of the container storage areas was one hundred, 55-gallon drums. However, the wastes have been routinely removed and disposed. The accumulation of waste is being managed well below the maximum waste volume.

CLOSURE PLAN REQUIREMENTS

This Closure Plan provides for closure of the "Big" Building, referenced in the aforementioned Consent Order, and the Outdoor Storage Rack Area and Safety Building, referenced in Part B documentation. The Closure Plan is submitted in accordance with applicable requirements of 40 CFR 265, Subpart G. The closure performance standards set forth in 40 CFR 265.111 require that the container storage areas be closed in a manner that:

a. Minimizes the need for further maintenance.

b. Controls, minimizes or eliminates, to the extent necessary to protect human health and the environment, post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated runoff, or hazardous waste decomposition products to the ground or surface waters or to the atmosphere.

This document will serve as GE's Closure Plan for the designated areas in accordance with 40 CFR 265.112. Following approval of this Closure Plan, GE will maintain a copy of the approved Closure Plan, including revisions and amendments thereto, at the West Burlington, Iowa facility until certification of closure has been submitted to and accepted by the EPA Region VII. Upon completion of closure, GE will submit to the Regional Administrator a certificate signed by its designated representatives and a Professional Engineer registered in the state of Iowa, certifying that the areas have been closed in accordance with the specifications in the approved Closure Plan, as required by 40 CFR 265.115.

SECTION 2

CLOSURE ACTIVITIES FOR THE "BIG" BUILDING

This section will present a detailed description of closure activities for the container storage areas including decontamination of the concrete surfaces.

HAZARDOUS WASTE SHIPMENT AND DISPOSAL

Wastes currently housed in the "Big" Building are managed off site at Clean Harbors in Chicago, Illinois, with the exception of cyanide wastes which are recycled by RFE or Cyanochem, and electroplating sludge which is recycled by Encycle. The on-going disposal of waste will not be accounted for in the estimated closure costs.

EQUIPMENT REQUIRED FOR CLOSURE

Limited equipment will be needed to complete closure in accordance with this Closure Plan. A list of the equipment necessary to complete closure activities is presented in Table 2-1. Provision of equipment will be determined by GE or their representative.

"BIG" BUILDING DECONTAMINATION AND SAMPLE COLLECTION

Container Storage Area Decontamination

There are two storage rack areas to be decontaminated within the "Big" Building. The storage racks are stacked two levels high, and each of the two areas cover approximately 16 feet by 7 feet. The storage rack areas are used to hold electroplating sludge and cyanide electroplating wastes, respectively. The same procedure will be followed in decontaminating both storage rack areas within the "Big" Building.

The concrete floor underneath the storage racks will be swept thoroughly to remove any loose debris. The floor sweepings will be collected and placed in containers used for off-site disposal as hazardous waste. Floor sweepings will not be analyzed for constituents listed in this Closure Plan.

The storage racks and underlying concrete surface will be thoroughly washed with a high-pressure power washer and a nonfoaming detergent such as Alcojet®. Water generated from the initial decontamination (with detergent) will be immediately vacuum collected from the racks and underlying concrete surface (to eliminate runoff onto adjacent areas) and transferred into clean 55-gallon drums labeled "Sludge Storage-Decontamination Water" or "Cyanide Storage-Decontamination Water," as appropriate. The storage racks and underlying concrete will then be thoroughly rinsed with the power washer without detergent. The rinse water will also be immediately vacuum collected, transferred into clean 55-gallon drums and labeled "Sludge Storage-Rinse Water" or "Cyanide Storage-Rinse-Water," as appropriate.

The interior of the vacuum will also be flushed with water between collection of decontamination and rinse waters and after use. This water will be containerized with the decontamination waters.

* ONLY 4 AREAS TO BE DECONED —
DRIP PANS & SADDLES WERE ALWAYS IN THE
SMALL BLDG.

Drip Pan and Saddle Storage Area Decontamination

Drip pans and saddles, formerly used as secondary containment underneath the storage racks at the facility, are currently stored in the "Big" Building. The drip pans and saddles will be relocated temporarily to the Outdoor Storage Rack Area for decontamination. The drip pans and saddles will be thoroughly washed with a high pressure power washer and a nonfoaming detergent such as Alcojet®. Washing will be conducted over a larger container (i.e., stock tank or poly tank) to collect the decontamination and rinse waters. Water generated from the initial decontamination (with detergent) will be vacuum collected and transferred into clean 55-gallon drums labeled "Drip Pans-Decontamination Water." The drip pans and saddles will then be thoroughly rinsed with the power washer without detergent. The rinse water will also be collected and transferred into clean 55-gallon drums labeled "Drip Pans-Rinse Water."

The concrete surface located in the "Big" Building where the drip pans and saddles had been stored will be swept thoroughly to remove any loose debris. The floor sweepings will be collected and placed in containers used for off-site disposal as hazardous wastes. The concrete surface then will be washed with a high-pressure power washer and a nonfoaming detergent such as Alcojet®. Water generated from the initial decontamination (with detergent) will be vacuum collected and transferred into clean 55-gallon drums labeled "'Big' Building-Decontamination Water." The concrete surface will then be thoroughly rinsed with the power washer without detergent. The rinse water will also be immediately vacuum collected and transferred into clean 55-gallon drums labeled "'Big' Building-Rinse Water." The decontaminated drip pans and saddles will then be returned to their original storage location within the "Big" Building.

Sampling of Decontamination and Rinse Water

Upon completion of decontamination activities, the decontamination and rinse waters will be sampled by lowering a clean Teflon™ bailer directly into a drum. Separate bailers will be used when sampling the decontamination and rinse water drums. The decontamination water sample will be collected from the first drum generated during the area's decontamination. This should facilitate collection of a sample which is most representative of contaminants which were removed from the surface. The rinse water sample will be collected from the last drum generated during the rinsing process. This sample should be indicative of the extent to which the area was cleaned. Upon collection, the samples will be transferred into appropriately marked sample containers and placed in coolers with cold packs. Disposable gloves will be worn during sampling and will be changed prior to collection of each subsequent sample.

Upon collection of samples, the drums of water generated during decontamination activities will be dated, sealed and transferred to a temporary storage area within the GE facility. The drums will be held pending receipt of decontamination and rinse water sample analytical results. Appropriate accumulation times for the decontamination and rinse waters will not be exceeded. The following criteria will be used to establish the appropriate disposal method for the water and to determine whether additional decontamination of the "Big" Building container storage area and drip pans is needed:

- If the decontamination or rinse waters exhibit contaminant concentrations equal to or exceeding target cleanup levels established in Section 4, the decontamination

and rinse waters will be discharged to the on-site wastewater pretreatment system in a manner consistent with state and federal regulations.

- If the rinse water exhibits contaminant concentrations equal to or in excess of the cleanup target levels established in Section 4, the two-step decontamination of the corresponding area will be repeated until analytical results of the rinse water exhibit contaminant concentrations below the cleanup target levels.

- If the rinse water exhibits contaminant concentrations below the cleanup target levels, the water will be discharged to the sanitary sewer in a manner consistent with state and federal regulations, and no further decontamination of the area will be conducted.

SECTION 3

CLOSURE ACTIVITIES FOR THE OUTDOOR STORAGE RACK AREA AND SAFETY BUILDING

This section will present a detailed description of closure activities for the container storage areas including decontamination of the concrete surfaces.

HAZARDOUS WASTE SHIPMENT AND DISPOSAL

No hazardous materials have been stored in the Outdoor Storage Rack Area since 1989. The Safety Building and Outdoor Storage Rack Area, subject of the RCRA Part B Application, are under Interim Status, and no waste is currently being stored in these container storage areas. Wastes formerly stored in these areas were managed off site at Clean Harbors in Chicago, Illinois, with the exception of cyanide wastes which were recycled by RFE and Cyanochem, and electroplating sludge which was recycled by Encycle.

EQUIPMENT REQUIRED FOR CLOSURE

Limited equipment will be needed to complete closure in accordance with this Closure Plan. A list of the required equipment is presented in Table 3-1. Provision of equipment will be determined by GE or their representative.

CONTAINER STORAGE AREA DECONTAMINATION AND SAMPLE COLLECTION

The outdoor storage racks are stacked two levels high and cover an area approximately 35 feet by 10 feet. The adjacent Safety Building (constructed of steel and moveable) has dimensions of approximately 20 feet by 10 feet and is empty at this time.

Outdoor Storage Rack Area

The concrete floor underneath the storage racks will be swept thoroughly to remove any loose debris. The floor sweepings will be collected and placed in containers used for disposal as hazardous waste. The storage racks and underlying concrete surface will be thoroughly washed with a high-pressure power washer and a nonfoaming detergent such as Alcojet®. Water generated from the initial decontamination (with detergent) will be immediately vacuum collected from the racks and underlying concrete surface (to eliminate runoff onto adjacent areas) and transferred into clean 55-gallon drums labeled "Outdoor Storage Rack Area-Decontamination Water." The storage racks and underlying concrete surface will then be thoroughly rinsed with the power washer without detergent. The rinse water will also be immediately vacuum collected, transferred into clean 55-gallon drums and labeled "Outdoor Storage Rack Area-Rinse Water."

Safety Building

The floor of the Safety Building will be swept thoroughly to remove any loose debris. The floor sweepings will be collected and placed in containers used for disposal as hazardous waste. Floor sweepings will not be analyzed for constituents listed in this Closure Plan.

The interior walls and floor in the Safety Building will be thoroughly washed with a high-pressure power washer and a nonfoaming detergent such as Alcojet®. Water generated from the initial decontamination (with detergent) will be vacuum collected and transferred into clean 55-gallon drums labeled "Safety Building-Decontamination Water." The interior walls and floor will then be thoroughly rinsed with the power washer without detergent. The rinse water will also be vacuum collected and transferred into clean 55-gallon drums labeled "Safety Building-Rinse Water."

Sampling of Decontamination and Rinse Waters

Upon completion of decontamination activities, the decontamination and rinse waters will be sampled by lowering a clean Teflon™ bailer directly into a drum. Separate bailers will be used when sampling the decontamination and rinse water drums. The decontamination water sample will be collected from the first drum generated during the area's decontamination. This should facilitate collection of a sample which is most representative of contaminants which were removed from the surface. The rinse water sample will be collected from the last drum generated during the rinsing process. This sample should be indicative of the extent to which the area was cleaned. Upon collection, the samples will be transferred into appropriately marked sample containers and placed in coolers with cold packs. Disposable gloves will be worn during sampling and will be changed prior to collection of each subsequent sample.

Upon collection of samples, the drums of water generated during decontamination activities will be dated, sealed and transferred to a temporary storage area within the GE facility. The drums will be held pending receipt of decontamination and rinse water sample analytical results. Appropriate accumulation times for the decontamination and rinse waters will not be exceeded. The following criteria will be used to establish the appropriate disposal method for the water and to determine whether additional decontamination of the Outdoor Storage Rack Area and Safety Building is needed:

- If the decontamination or rinse waters exhibit contaminant concentrations equal to or exceeding target cleanup levels established in Section 4, the decontamination and rinse waters will be discharged to the on-site wastewater pretreatment system in a manner consistent with state and federal regulations.

- If the rinse water exhibits contaminant concentrations equal to or in excess of the cleanup target levels established in Section 4, the two-step decontamination of the corresponding unit will be repeated until analytical results of the rinse water exhibit contaminant concentrations below the cleanup target levels.

- If the rinse water exhibits contaminant concentrations below the cleanup target levels, the water will be discharged to the sanitary sewer in a manner consistent with state and federal regulations, and no further decontamination of the unit will be conducted.

SECTION 4

FIELD SAMPLING AND LABORATORY PROTOCOL

This section will present a discussion of the performance standards, sample handling and analysis protocol to be followed during closure of the former on-site hazardous waste container storage areas at the GE facility.

PERFORMANCE STANDARDS

This Closure Plan is designed to meet the performance standards as defined in 40 CFR 265.111 (i.e., to minimize the need for future maintenance of the former storage areas and to minimize or eliminate the release of hazardous waste constituents to the atmosphere, ground and surface waters). Specific levels of cleanup for these areas are identified in the "Cleanup Target Levels" part of this section.

HAND SAMPLING EQUIPMENT DECONTAMINATION

Hand sampling equipment (bailer, etc.), used for collection of water samples, will be decontaminated before use and prior to collection of each subsequent sample. The equipment will be thoroughly hand washed with water and a nonphosphate detergent such as Alconox® and then rinsed with distilled water. Water generated during the sampling equipment decontamination will be combined with the "decontamination water" (water with detergent) generated during the decontamination of each former hazardous waste container storage area. Handling procedures for the water will be based on analytical results from the decontamination water from the concrete surface of each area.

QUALITY ASSURANCE/QUALITY CONTROL SAMPLE COLLECTION

In order to verify the validity of samples collected, duplicate quality assurance/quality control (QA/QC) samples and equipment blanks will also be collected. Duplicate water samples and equipment blanks will be collected at a frequency of ten percent (i.e., one duplicate for every ten water samples). The duplicate water samples will be labeled as from a different water sample location. The actual identity of the duplicate will be logged in a bound field book at the time of sample collection.

In addition to the duplicate samples and equipment blanks collected in the field, the laboratory analyzes matrix spikes, matrix spike duplicates, etc., as part of normal quality assurance procedures. A discussion of all QA/QC data and how it reflects on the validity of analytical results for closure samples will be presented in the Closure Certification document.

SAMPLE PREPARATION AND SHIPMENT

Decontamination and rinse water samples will be placed directly into laboratory-supplied containers. Table 4-1 provides a summary of the types of sample containers and preservation

TABLE 4-1

ANALYTICAL SUMMARY

Parameter	EPA Method	MDL	Container	Preservative	Maximum Holding Time[a]
Metals					
Lead	7421	0.005 mg/L	500 ml Plastic	HNO_3	180 Days
Cyanide	9010	0.007 mg/L	1,000 ml Plastic	NaOH	14 Days
Silver	6010	0.03 mg/L	500 ml Plastic	HNO_3	180 Days
Cadmium	7131	0.001 mg/L	500 ml Plastic	HNO_3	180 Days
Chromium	6010	0.03 mg/L	500 ml Plastic	HNO_3	180 Days
Volatiles					
Volatile Organics	8260	b	Three, 40 ml Glass Vials	4°C, HCl	14 Days

a Holding duration is from time of collection for all methods.

b Method Detection Limits (MDLs) for volatile organics are as follows: toluene (1.0 µg/L); ethylbenzene (1.0 µg/L); xylenes (1.0 µg/L); 1,1,1-trichloroethane (1.0 µg/L); 1,1,2-trichloro-1,2,2-trifluoroethane (1.0 µg/L); methyl ethyl ketone (5 µg/L); and methyl isobutyl ketone (5 µg/L).

EPA = Environmental Protection Agency
ml = milliliter

which will be used for the rinse water samples. Each sample container will be labeled with the following information:

- Site Location
- Sample Identity
- Date
- Time of Collection
- Sampler's Initials

Immediately upon sample collection, the sample container(s) will be placed in cooler(s) with cold packs. Upon completion of daily closure activities, the coolers(s) will be secured for proper handling and shipped by overnight service to the laboratory for analysis. Chain of custody and sample analysis request forms will accompany all samples during shipment. Completed chain of custody and sample analysis request forms will be presented in the required Closure Certification. Blank copies of the forms are presented in Appendix A.

SAMPLE ANALYSIS

Based upon the nature of the contaminants contained in the storage areas, the following hazardous constituents will be measured for total analysis:

Samples from the sludge storage racks in the "Big" Building will be analyzed for total:

- Lead
- Cyanide
- Silver
- Cadmium
- Chromium
- Xylenes
- Ethylbenzene
- Methyl Ethyl Ketone
- Methyl Isobutyl Ketone
- Toluene

Samples from the cyanide storage racks in the "Big" Building will be analyzed for total:

- Lead
- Cyanide
- Silver
- Cadmium
- Chromium

Samples from both the drip pan and saddle storage areas in the "Big" Building will be analyzed for total:

- Lead
- Cyanide
- Silver
- Cadmium
- Chromium
- Xylenes
- Ethylbenzene
- Methyl Ethyl Ketone
- Methyl Isobutyl Ketone
- Toluene
- 1,1,1-Trichloroethane
- 1,1,2-Trichloro-1,2,2-Trifluoroethane

Samples from the Outdoor Storage Rack Area will be analyzed for total:

- Lead
- Cyanide
- Silver
- Cadmium
- Chromium
- Xylenes
- Benzene
- Ethylbenzene
- Methyl Isobutyl Ketone
- Toluene
- 1,1,1-Trichloroethane
- 1,1,2-Trichloro-1,2,2-Trifluoroethane

Samples from the Safety Building will be analyzed for total:

- Lead
- Cyanide
- Silver
- Cadmium
- Chromium
- Benzene
- Xylenes
- Ethylbenzene
- Methyl Ethyl Ketone
- Methyl Isobutyl Ketone
- Toluene
- 1,1,1-Trichloroethane
- 1,1,2-Trichloro-1,2,2-Trifluoroethane

These compounds are selected as the hazardous constituents present at the site by which the success of the clean closure can be measured. Table 4-1 presents a summary of the analytical methods and reporting limits which will be utilized for analysis of samples. All applicable analytical methods, QA/QC procedures and chain of custody protocols will be in accordance with EPA Publication SW-846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods."

LABORATORY QUALITY ASSURANCE/QUALITY CONTROL

All samples collected during closure activities will be analyzed using EPA-approved methods as outlined in the latest version of EPA Manual SW-846 (see Table 4-1). All analyses will be conducted in accordance with the laboratory's QA/QC plan to ensure the accuracy of reported results. Quality assurance data, including analytical spikes and duplicates, will be provided with the reported results.

CLEANUP TARGET LEVELS

The cleanup target levels for the water generated during closure activities originate from health-based standards developed for a specific constituent. The target levels are based on an assumed ingestion rate of 2 liters/day for a 70-year period (70 kg adult) and RfDs for carcinogens and systemic toxicants. If an RfD-based target level was not available, the maximum contaminant level (MCL) or other appropriate health-based criteria for the constituent was used for the cleanup target level. Unless otherwise indicated, all target levels and MCLs were taken from the July 27, 1990 Federal Register, Appendices A and B. The following is a discussion of the selection of each target level:

- Lead: The target level for lead is 0.05 mg/L. An MCL for lead is not available. The target level of 0.05 mg/L is the former MCL.

- Cyanide: The target level of 0.7 mg/L is based on a systemic RfD for cyanide in water.

- Silver: The target level of 0.02 mg/L is the drinking water equivalent level for silver. An MCL for silver is not available.

- Cadmium: The target level of .01 mg/L is the MCL for cadmium.

- Chromium, Total: The target level of .10 mg/L is the MCL for chromium. This target level was taken from 40 CFR 141.62.

- Xylenes: The target level of 70 mg/L is based on a systemic RfD for xylene in water.

- Ethylbenzene: The target level of 4 mg/L is based on a systemic RfD for ethylbenzene in water.

- Methyl Ethyl Ketone: The target level of 2 mg/L is based on a systemic RfD for methyl ethyl ketone in water.

- Methyl Isobutyl Ketone: The target level of 2 mg/L is based on a systemic RfD for methyl isobutyl ketone in water.

- Toluene: The target level of 10 mg/L is based on a systemic RfD for toluene in water.

- 1,1,1-Trichloroethane: The target level of 0.2 mg/L is the MCL for 1,1,1-trichloroethane.

- 1,1,2-Trichloro-1,2,2-Trifluoroethane: The target level of 1 µg/L is the method reporting limit for 1,1,2-trichloro-1,2,2-trifluoroethane in water. A health-based standard for 1,1,2-trichloro-1,2,2-trifluoroethane in water has not been established.

- Benzene: The target level of 0.005 mg/L is the MCL for benzene.

Appendix B
Sampling Plan
(from)
EPA-RCRA
Closure Documentation Requirements

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
ENVIRONMENTAL SERVICES DIVISION
REGION 7
25 FUNSTON ROAD
KANSAS CITY, KANSAS 66115

NOV 16 1994

MEMORANDUM

SUBJECT: Review of Sampling Plan for General Electric Co.
West Burlington, Iowa (QQG62)

FROM: Robert B. Dona RBDona
Environmental Engineer, EDSB/ENSV

THRU: Jeffrey A. Wandtke
Regional QA Manager, EDSB/ENSV

TO: Donald L. Lininger
Work Assignment Manager, IOWA/RCRA/WSTM

I have reviewed the Sampling Plan for closure oversight sampling at the General Electric Company, West Burlington, Iowa, and I recommend its approval with the following comments.

1. The MGP code for 1,1,2-Trichloro-1,2,2-trifluoroethane, WA03, was added to the Analytical Services Request form. The MGP code for cyanide, WJ25, was changed to WT09.

2. The level of interest for benzene, 5 ug/L, is near the detection limit for routine volatile organic analysis by SW-846 Method 8260. If the laboratory is unable to achieve a detection limit of less than 5 ug/L, another analytical method will be used.

3. The activity number ADF13 has been assigned to this sampling activity.

If there are any questions, please call me at 551-5182.

Attachment
QA Document No. 95029

QA Document Review Checklist

To be completed by QA Office.

Project/Plan Name: General Electric Co., West Burlington, Iowa

QA Activity No.: QQG62 Project Leader: Don Lininger Phone: 551-7724

QA Document No.: 95029 QA Coordinator: Robert Dona Phone: 551-5182

To be completed by QA Reviewer.

Deficiencies were found in the elements checked below:
(See the attached review comments for explanation)

1. Project Objectives

___ Objective or scope of the data collection activity
___ Intended use of the data
___ Action level, detection limit requirements, data quality objectives

2. Sampling (Design and Procedures)

___ Sampling network and rationale
___ Sampling schedule, locations, frequency, project duration
___ Sample matrices, target analytes
___ Sampling/Decontamination procedures
___ Sample containers, preservation, holding times
___ Sample shipment/transportation, coordination with the laboratory
___ Sample custody and documentation of field activities

3. Analytical Methods

_X_ Quality of written procedure or choice of reference
___ Method detection limit, precision, accuracy, comparability
___ Laboratory documentation

4. Field/Laboratory QC Samples

___ Field QC elements
___ Laboratory QC elements
___ Frequency of QC checks
___ Control limits and corrective actions

5. Data Review, Validation and Reporting

___ Review process
___ Acceptance/Rejection criteria for validation
___ Data deliverables

Review conducted by: Robert Dona

To be completed by QA Office.

QA REVIEW CONCLUSION: QA Coordinator (sign): Robert T B Dona

Review Completion Date: November 16, 1994

(1) ___ Approval Recommended (2) _X_ Approval Recommended With Comments (3)___ Resubmission Recommended

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VII
726 MINNESOTA AVENUE
KANSAS CITY, KANSAS 66101

SAMPLING PLAN FOR OVERSIGHT ACTIVITIES AT THE GENERAL ELECTRIC COMPANY WEST BURLINGTON, IOWA EPA ID # IAD005272703

APPROVAL:

EPA WORK ASSIGNMENT MANAGER
Don Lininger

11/9/94
DATE

EPA REGIONAL QUALITY ASSURANCE MANAGER
Jeffery A. Wandtke

11/16/94
DATE

RECEIVED
11/14/94

95029
QQGG2
A65

The purpose of this plan is to request analytical services from the EPA Region VII Environmental Services Division (ENSV). Representatives of the General Electric Company (GE) will be collecting rinsewater samples at the facility in accordance with the EPA Region VII tentatively approved Closure Plan during the week of January 9, 1995. The rinsewater samples will then be analyzed by representatives of GE for the constituents identified in the Levels of Interest table.

Split rinsewater sampling activities will be conducted at the subject site in order to verify the analytical results obtained by facility representatives. Split rinsewater samples will be provided to EPA by representatives of GE.

GE manufactures medium and low voltage switchgears and switchboards. Three container storage areas are undergoing closure. A diagram of the facility is enclosed.

Table 1, attached, describes the parameter and analytical requirements for rinsewater sampling activities. Sample containerization, labeling, and preservation procedures will be conducted pursuant to EPA Region VII SOPs #2130.3A and .4A while chain-of-custody and sample transport procedures will be conducted per SOP #2130.2A.

Samples will be delivered to the EPA Region VII Laboratory for in-house analyses or assignment to a contract laboratory. The analytical methods, laboratory quality control, and data validation will follow the approved standard operating procedures of the assigned laboratory.

Investigation derived waste (IDW) will be managed pursuant to the May 1991 EPA document, "Management of Investigation-Derived Wastes During Site Inspections."

A completed Analytical Services Request Form and Sampling Supplies Request Form is attached. It is anticipated that the sampling supplies will be picked up during the week of January 9, 1995.

Table 1
Sample Summary

Sample Locations	Number of Samples	Matrix	Constituents	Analytical Method, SW-846	Container per Sample	Preservatives
Split rinsewater samples	2	Water	Lead, Cadmium, Chromium, Silver	6010	1-Liter plastic cubitainer	HNO_3 to pH < 2.
			Cyanide	9010	1-Liter plastic cubitainer	NaOH to pH > 12.
			Volatile Organics - See Level of Interest Table	8260	2-40 ml. VOA vials	HCL to pH of 2 and cool to 4° C.
Duplicate split rinsewater sample	1	Water	Same as above	Same as above	Same as above	Same as above
Trip Blank	1	Water	Volatile Organics	8260	2-40 ml. VOA vials	Cool to 4° C.

USEPA Region VII Analytical Services Request (ASR) Form

Activity No.: ADE13 Date: 11/9/94
Site Name, City, & State: General Electric Co., West Burlington, Iowa
EPA Project Manager: Don Lininger
Section/Branch: Iowa/RCRA Phone No.: x7704
Contractor Contact: Jim Caldwell
Contractor: USGS Phone No.: 319-358-3622
Projected Sample Delivery Date: January 13, 1995
Funding Program Element: WSTM (RCRA) IA - Closure oversight

Request Summary:

No. of Samples	Matrix	Group/Parameter Name	Group/Parameter MGP Code
3*	Water	Lead, Cadmium, Chromium, Silver, Cyanide, Xylenes, Benzene, Ethylbenzene, Methyl	WM14, WM06, WM08, WM01, WT09, WV37,
		ethyl Ketone, Methyl Isobutyl Ketone, toluene, 1,1,1-Trichloroethane, 1,1,2-Trichloro-1,2,2-	WV17, WV29, WV32, WV35, WV26, WV13,
		Trifluoroethane	WA03,
1	Water	Volatile Trip Blank	WV

Use additional pages as needed for clarity.

Levels Of Interest Are Specified (mark one): In The QA Document-☐ or On The Back-☒

Special Requirements or Comments:

* Includes one Duplicat sample

NOTE: Submit This Form To RQAM/ENSV 30 Days Before Sample Delivery

Approvals:

11/9/94
EPA Project Manager (Date)

EPA Branch or Section Chief (Date)

The Following Is Completed By ENSV Personnel ONLY

RECEIVED 11/14/94 ABD

QA Document: ☐-Generic QAPP ☒-Site Specific QAPP ☐-Other:

Concurrences:

RQAM: RBDonca 11/16/94 APPROVED RQG62/94029 Comment:

Chief, LABO: Comment:

Laboratory Assignment:	Scheduled Completion:	Distribution:
☐-Region VII	☐-Routine:	■ EPA Project Manager
☐-ESAT	• Non-CLP = 4 weeks	■ Chief, LABO/ENSV
☐-CLP	• CLP = 8 weeks	☐ Chief, GNAN/LABO
☐-RECAP	☐-Other:	☐ Chief, ORGN/LABO
☐-Other	Date:	■ Chief, CLPM/LABO
		■ Data Coordinator
		■ RSCC
		☐ Other:

(Revised February 1993)

USEPA Region VII Sampling Supplies Request (SSR) Form

ctivity No.: ADF13 Site Name: General Electric Co.

Contact Name: Don Lininger Telephone No.: x7724

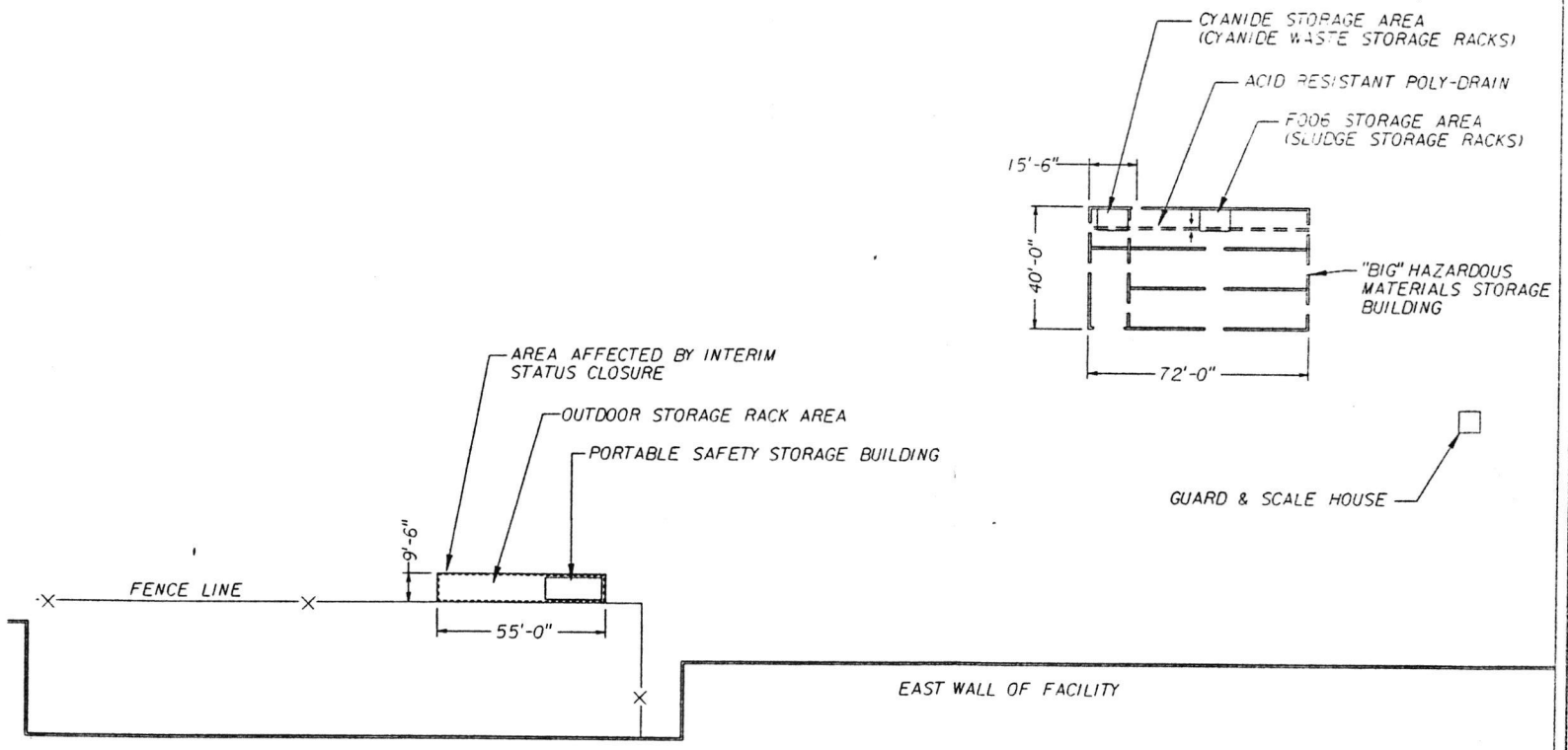
Date Equipment to be Picked Up: January 9, 1995

Item Description	Amount Needed
Sample Containers:	
4-oz. (100 ml) Plastic Bottle	7
1-Liter Plastic Cubitainer	
4-Liter Plastic Cubitainer	
8-Liter Plastic Cubitainer	
20-Liter Plastic Cubitainer	
40-ml Glass Vials (Routine - 2 ea in 1-1 cubie with charcoal thimble)	3
40-ml Glass Vials (Low DL - 4 ea in 1-1 cubie with charcoal thimble)	
8-oz. (250 ml) Wide Mouth Glass Jar	
32-oz.(1 Liter) Wide Mouth Glass Jar	
8-oz. (250 ml) Amber Glass Bottle	
80-oz. (2.5 Liter) Amber Glass Bottle	
4-Liter Amber Glass Bottle	
Sampling Supplies:	
Sampling Spoons	
Aluminum Pans	
1-qt. (1 Liter) Metal Paint Can (with Vermiculite®)	
1-gal. (4 Liter) Metal Paint Can (with Vermiculite®)	
Other:	
Other:	
Preservatives: (return preservative containers to the laboratory)	
HCl (1:1)	X
HNO_3 (1:1)	X
H_2SO_4 (Concentrated)	
NaOH (Pellets)	X
Other:	
Shipping Supplies:	
Large Plastic Bags (ice chest liner)	1
Ice Chests	1
Fiber Tape (by roll)	
Custody-Seal Tape (by piece, not roll)	
Chain-Of-Custody Forms	1
Storage Bags for Chain-Of-Custody Forms	1
Packing Foam	
Quality Control Samples:	
Water Trip Blanks (VOA only)	1 X
Soil Trip Blanks (VOA only)	

Performance Evaluation (PE) Samples:

No. of PE Samples	Matrix	Target Analytes	Desired Concentration Range

(Revised February 1993)



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SCALE IN FEET

MONTGOMERY WATSON

GENERAL ELECTRIC COMPANY
GE SWITCHGEAR OPERATION
WEST BURLINGTON, IOWA

SITE PLAN

FIGURE 1-2

Appendix C
Facility Photographs
Closure of Hazardous-Waste
Container Storage Areas

Photo #1--4/19/95--View to southeast showing General Electric facility "Big Building" used for storage of hazardous wastes.

Photo #2--4/19/95--View to west showing Portable Safety Building at G.E. facility. This building was formerly used as an accumulation area (temporary storage) of hazardous wastes. Crew is vacuuming up decontamination water generated from pressure-washing the interior of the building.

Photo #3--4/19/95--View to west showing interior of "Safety Building". Crew (in white tyvek suits) is pressure washing floor, walls, and ceiling of building during decontamination/closure activities. Note metal beams on floor used to elevate plywood subfloor off building's steel floor.

Photo #4--4/19/95--View of interior of "Safety Building". Note metal gridwork used to support plywood subfloor above metal floor of building. This photo taken during final rinse of interior surfaces of building. T. Noteboom, Montgomery-Watson (not wearing Tyvek protective garments) is operating the pressure washer.

Photo #5--4/19/95--View to southwest showing Outdoor Storage Area (note metal racks) during decontamination activities. Metal 55-gallon drum was used to contain decontamination fluid generated during clean-up operations.

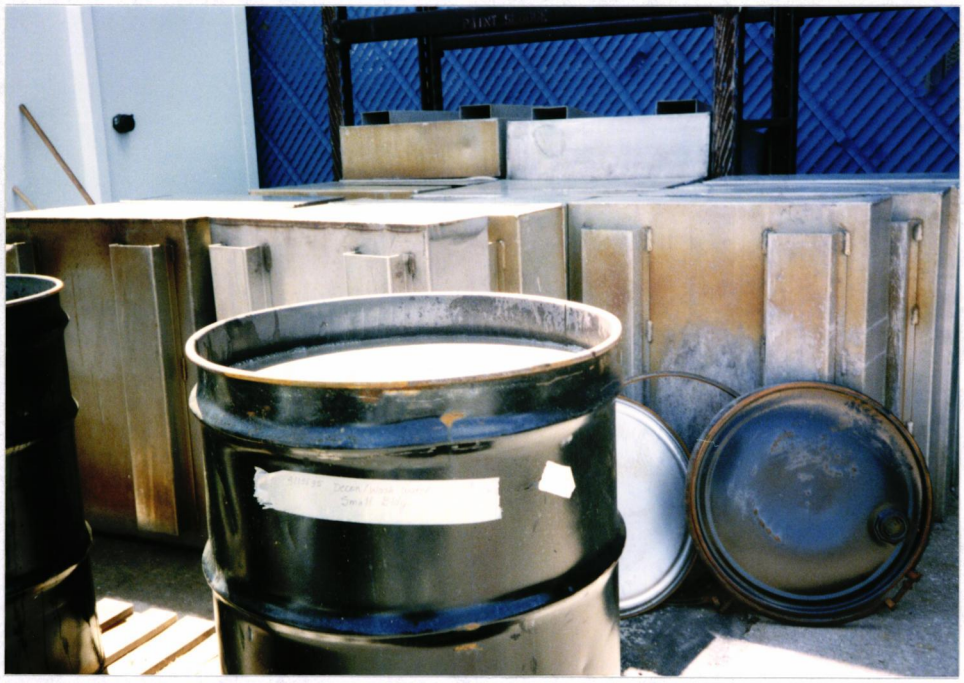

Photo #6--4/19/95--View showing 55-gallon barrel of decontamination fluid. Note stainless steel "drip pans" in background. These pans, formerly used for secondary containment underneath the storage racks at the facility, were decontaminated during the closure operation.

Appendix D
EPA Field Sheets

(1)

DRAFT

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 95 ACTNO: ADF13 SAMNO: 001 QCC: _ MEDIA: WATER PL: DONA, BOB

ACTIVITY DES: GENERAL ELECTRIC CO. REF LATITUDE: __ __ __
LOCATION: WEST BURLINGTON IA PROJECT NUM: A60 PT: LONGITUDE: ___ __ __

SAMPLE DES: DECONTAMINATION RINSEATE (WATER) DATE TIME FROM REF PT
LOCATION: OUTDOOR STORAGE RACKS IA BEG: 4/19/95 3:30 EAST: ____
CASE/BATCH/SMO: _____/_/_____ LAB: ___ END: __/__/__ __:__ NORTH: ____
STORET/AIRS NO: _____ DOWN: ____

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
1 L CUBITAINER	1:1 HN03	WM14	LEAD, TOTAL, BY ICAP
1 L CUBITAINER	1:1 HN03	WM06	CADMIUM, TOTAL, BY ICAP
1 L CUBITAINER	1:1 HN03	WM08	CHROMIUM, TOTAL, BY ICAP
1 L CUBITAINER	1:1 HN03	WM01	SILVER, TOTAL, BY ICAP
1 L CUBITAINER	NAOH+COOL(4 C)	WT09	CYANIDE, TOTAL
2-40 ML VIALS	HCL +COOL (4 C)	WV37	XYLENES, TOTAL, BY GC/MS
2-40 ML VIALS	HCL +COOL (4 C)	WV17	BENZENE, BY GC/MS
2-40 ML VIALS	HCL +COOL (4 C)	WV29	ETHYL BENZENE, BY GC/MS
2-40 ML VIALS	HCL +COOL (4 C)	WV32	METHYL ETHYL KETONE (2-BUT
2-40 ML VIALS	HCL +COOL (4 C)	WV35	4-METHYL-2-PENTANONE(MIBK)
2-40 ML VIALS	HCL +COOL (4 C)	WV26	TOLUENE, BY GC/MS
2-40 ML VIALS	HCL +COOL (4 C)	WV13	TRICHLOROETHANE,1,1,1-, BY
2-ML VIALS	COOL (4 C)	WA03	1,1,2-TRICHLORO 1,2,2-TRIF

COMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER: ___ OPERABLE UNIT: ___

DECONTAMINATION RINSEATE (CONTAINERIZED) FROM OUTDOOR STORAGE RACK AREA.

SAMPLE COLLECTED BY: Bellwell U.S. Geological Survey

(2)

DRAFT

FIELD SHEET
U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 95 ACTNO: ADF13 SAMNO: 001 QCC: D MEDIA: WATER PL: DONA, BOB

ACTIVITY DES: GENERAL ELECTRIC CO. REF LATITUDE: __ __ __
LOCATION: WEST BURLINGTON IA PROJECT NUM: A60 PT: LONGITUDE: ___ __ __

SAMPLE DES: DUPLICATE/SAMPLE 001 DATE TIME FROM REF PT
LOCATION: DECONTAM. RINSEATE - OUTDOOR STORAGE RACKS BEG: 4/19/95 3:35 EAST: ____
CASE/BATCH/SMO: _____/_/_____ LAB: ___ END: __/__/__ __:__ NORTH: ____
STORET/AIRS NO: _____ DOWN: ____

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
1 L CUBITAINER	1:1 HN03	WM14	LEAD, TOTAL, BY ICAP
1 L CUBITAINER	1:1 HN03	WM06	CADMIUM, TOTAL, BY ICAP
1 L CUBITAINER	1:1 HN03	WM08	CHROMIUM, TOTAL, BY ICAP
1 L CUBITAINER	1:1 HN03	WM01	SILVER, TOTAL, BY ICAP
1 L CUBITAINER	NAOH+COOL(4 C)	WT09	CYANIDE, TOTAL
2-40 ML VIALS	HCL +COOL (4 C)	WV37	XYLENES, TOTAL, BY GC/MS
2-40 ML VIALS	HCL +COOL (4 C)	WV17	BENZENE, BY GC/MS
2-40 ML VIALS	HCL +COOL (4 C)	WV29	ETHYL BENZENE, BY GC/MS
2-40 ML VIALS	HCL +COOL (4 C)	WV32	METHYL ETHYL KETONE (2-BUT
2-40 ML VIALS	HCL +COOL (4 C)	WV35	4-METHYL-2-PENTANONE(MIBK)
2-40 ML VIALS	HCL +COOL (4 C)	WV26	TOLUENE, BY GC/MS
2-40 ML VIALS	HCL +COOL (4 C)	WV13	TRICHLOROETHANE,1,1,1-, BY
2-ML VIALS	COOL (4 C)	WA03	1,1,2-TRICHLORO 1,2,2-TRIF

COMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

DECON. RINSEATE DUPLICATE SAMPLE
OUTDOOR STORAGE RACK AREA.

SAMPLE COLLECTED BY : [signature] U.S. Geological Survey

(3)

DRAFT

FIELD SHEET
U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 95 ACTNO: ADF13 SAMNO: 002 QCC: _ MEDIA: WATER PL: DONA, BOB

ACTIVITY DES: GENERAL ELECTRIC CO. REF LATITUDE: __ __ __
LOCATION: WEST BURLINGTON IA PROJECT NUM: A60 PT: LONGITUDE: ___ __ __

SAMPLE DES: Decontamination Rinsate
LOCATION: Portable Safety Bldg IA
CASE/BATCH/SMO: _____/_/_____ LAB: ___
STORET/AIRS NO: _____

	DATE	TIME	FROM REF PT
BEG:	4/19/95	4:00	EAST: ____
END:	__/__/__	__:__	NORTH: ____
			DOWN: ____

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
1 L CUBITAINER	1:1 HN03	WM14	LEAD, TOTAL, BY ICAP
1 L CUBITAINER	1:1 HN03	WM06	CADMIUM, TOTAL, BY ICAP
1 L CUBITAINER	1:1 HN03	WM08	CHROMIUM, TOTAL, BY ICAP
1 L CUBITAINER	1:1 HN03	WM01	SILVER, TOTAL, BY ICAP
1 L CUBITAINER	NAOH+COOL(4 C)	WT09	CYANIDE, TOTAL
2-40 ML VIALS	HCL +COOL (4 C)	WV37	XYLENES, TOTAL, BY GC/MS
2-40 ML VIALS	HCL +COOL (4 C)	WV17	BENZENE, BY GC/MS
2-40 ML VIALS	HCL +COOL (4 C)	WV29	ETHYL BENZENE, BY GC/MS
2-40 ML VIALS	HCL +COOL (4 C)	WV32	METHYL ETHYL KETONE (2-BUT
2-40 ML VIALS	HCL +COOL (4 C)	WV35	4-METHYL-2-PENTANONE(MIBK)
2-40 ML VIALS	HCL +COOL (4 C)	WV26	TOLUENE, BY GC/MS
2-40 ML VIALS	HCL +COOL (4 C)	WV13	TRICHLOROETHANE,1,1,1-, BY
2-ML VIALS	COOL (4 C)	WA03	1,1,2-TRICHLORO 1,2,2-TRIF

COMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

Decontamination Rinsate (containerized)
Portable Safety Bldg.

SAMPLE COLLECTED BY:  U.S. Geological Survey

(4)

DRAFT

FIELD SHEET
U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 95 ACTNO: ADF13 SAMNO: 003 QCC: F MEDIA: WATER PL: DONA, BOB

ACTIVITY DES: GENERAL ELECTRIC CO. REF LATITUDE: __ __ __
LOCATION: WEST BURLINGTON IA PROJECT NUM: A60 PT: LONGITUDE: ___ __ __

SAMPLE DES: TRIP BLANK DATE TIME FROM REF PT
LOCATION: G.E. FACILITY BURLINGTON IA BEG: 4/19/95 4:05 EAST: ____
CASE/BATCH/SMO: ____/__/____ LAB: ___ END: __/__/__ __:__ NORTH: ____
STORET/AIRS NO: ____ DOWN: ____

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
2-40 ML VIALS	HCL +COOL (4 C)	WV	WATER VOLATILES

COMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

TRIP BLANK

SAMPLE COLLECTED BY: U.S. Geological Survey

(5)

DRAFT

FIELD SHEET
U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION VII
ENVIRONMENTAL SERVICES DIV. 25 FUNSTON RD. KANSAS CITY, KS 66115

FY: 95 ACTNO: ADF13 SAMNO: 004 QCC: MEDIA: WATER PL: DONA, B.

ACTIVITY DES: General Electric Co
LOCATION: W. Burlington, IA IA PROJECT NUM:
REF LATITUDE: __ __ __
PT: LONGITUDE: __ __ __

SAMPLE DES:
LOCATION: Eqpt Rinsate IA
CASE/BATCH/SMO: ____/_/____ LAB: ___
STORET/AIRS NO: _____

DATE TIME FROM REF PT
BEG: 4/19/95 4:30 EAST: ____
END: __/__/__ __:__ NORTH: ____
DOWN: ____

ANALYSIS REQUESTED:

CONTAINER	PRESERVATIVE	MGP	NAME
		WM14	LEAD
1 LITER Cubic	1:1 HNO_3	WM06	CADMIUM
		WM08	CHROMIUM
		WM01	SILVER

COMMENTS: FOR SUPERFUND ONLY: SUBSITE IDENTIFIER:___ OPERABLE UNIT:___

Equipment Rinse: Distilled Water rinse from "Clean" 55 gallon drum used for containerizing wash water from facility decontamination.
This Sample Collected at Request of Tibby Notebloom, Montgomery-Watson, to determine presence of above-listed Metals in Rinsewater of "Clean" 55-gallon drums.

SAMPLE COLLECTED BY : [signature] USGS

Appendix E
Analytical Results
Split Decontamination Rinse-Water Samples
EPA Analytical Laboratory

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VII
726 MINNESOTA AVENUE
KANSAS CITY, KANSAS 66101

MAY 22 1995

Mr. Eric Rankin
General Electric Company
510 East Agency Road
West Burlington, IA 52655

Dear Mr. Rankin:

RE: Transmittal of Analytical Results
General Electric Company
West Burlington, Iowa
EPA RCRA ID No. IAD005272703

Enclosed you will find a copy of the analytical results from the rinsewater samples that were collected at the referenced facility on April 19, 1995 by the U. S. Environmental Protection Agency's authorized representative, Mr. Jim Caldwell of the U. S. Geological Survey. If you have any questions regarding this information, please contact me at (913) 551-7724.

Sincerely,

Don Lininger
Iowa Section
Air, RCRA and Toxics Division

Enclosure

cc: Joseph Obr, Iowa Department of Natural Resources (w encl)
Terry Noteboom, Montgomery Watson (w encl)
Jim Caldwell, U. S. Geological Survey (w encl)

ANALYSIS REQUEST REPORT

VALIDATED DATA

FOR ACTIVITY: ADF13

DONA, BOB

05/12/95 16:34:44

ALL REAL SAMPLES AND FIELD Q.C.

* FINAL REPORT

FY: 95 ACTIVITY: ADF13 DESCRIPTION: GENERAL ELECTRIC CO. LOCATION: WEST BURLINGTON IOWA

STATUS: ACTIVE TYPE: SAMPLING - IN HOUSE ANALYSIS PROJECT: A60

LABO DUE DATE IS 5/21/95. REPORT DUE DATE IS 6/18/95.

INSPECTION DATE: 4/19/95 ALL SAMPLES RECEIVED DATE: 04/21/95

ALL DATA APPROVED BY LABO DATE: 05/12/95 FINAL REPORT TRANSMITTED DATE: 00/00/00

EXPECTED LABO TURNAROUND TIME IS 30 DAYS EXPECTED REPORT TURNAROUND TIME IS 60 DAYS

ACTUAL LABO TURNAROUND TIME IS 21 DAYS ACTUAL REPORT TURNAROUND TIME IS 0 DAYS

SITE CODE: SITE:

SAMP. NO.	QCC	M	DESCRIPTION	SAMPLE # STATUS	CITY	STATE	AIRS/ STORET LOC	NO	SECT	LAY-ER	BEG. DATE	BEG. TIME	END. DATE	END. TIME
001		W	DECON RINSATE-OUTDOOR STORAGE RACKS	1	WEST BURLINGTON	IOWA					04/19/95	15:30	00/00/00	00:00
001	D	W	DECONTAMINATION RINSATE/DUPLICATE	1	WEST BURLINGTON	IOWA					04/19/95	15:35	00/00/00	00:00
002		W	DECON RINSATE/PORTABLE SAFETY BLDG.	1	WEST BURLINGTON	IOWA					04/19/95	16:00	00/00/00	00:00
003	F	W	TRIP BLANK	1	WEST BURLINGTON	IOWA					04/19/95	16:05	00/00/00	00:00
004		W	EQUIPMENT RINSATE	1	WEST BURLINGTON	IOWA					04/19/95	16:30	00/00/00	00:00

EXPLANATION OF CODES AND INFORMATION ON ANALYSIS REQUEST DETAIL REPORT

SAMPLE INFORMATION:

SAMP. NO. = SAMPLE IDENTIFICATION NUMBER (A 3-DIGIT NUMBER WHICH IN COMBINATION WITH THE ACTIVITY NUMBER AND QCC, PROVIDES AN UNIQUE NUMBER FOR EACH SAMPLE FOR IDENTIFICATION PURPOSES)

QCC = QUALITY CONTROL CODE (A ONE-LETTER CODE USED TO DESIGNATE SPECIFIC QC SAMPLES. THIS FIELD WILL BE BLANK FOR ALL NON-QC OR ACTUAL SAMPLES):

- B = CAL INCREASED CONCENTRATION FOR A LAB SPIKED DUP SAMPLE
- D = MEASURED VALUE FOR FIELD DUPLICATE SAMPLE
- F = MEASURED VALUE FOR FIELD BLANK
- G = MEASURED VALUE FOR METHOD STANDARD
- H = TRUE VALUE FOR METHOD STANDARD
- K = CAL INCREASED CONCENTRATION FOR FIELD SPIKED DUP SAMPLE
- L = MEASURED VALUE FOR A LAB DUPLICATE SAMPLE
- M = MEASURED VALUE FOR LAB BLANK
- N = MEASURED CONCENTRATION OF FIELD SPIKED DUPLICATE
- P = MEASURED VALUE FOR PERFORMANCE STANDARD
- R = CAL INCREASED CONCENTRATION RESULTING FROM LAB SPIKE
- S = MEASURED CONCENTRATION OF LAB SPIKED SAMPLE
- T = TRUE VALUE OF PERFORMANCE STANDARD
- W = MEASURED CONCENTRATION OF LAB SPIKED DUPLICATE
- Y = MEASURED CONCENTRATION OF FIELD SPIKED SAMPLE
- Z = CAL INCREASED CONCENTRATION RESULTING FROM FIELD SPIKE
- 1 = MEASURED VALUE OF FIRST SPIKED REPLICATE
- 2 = MEASURED VALUE OF SECOND SPIKED REPLICATE
- 3 = MEASURED VALUE OF THIRD SPIKED REPLICATE
- 4 = MEASURED VALUE OF FOURTH SPIKED REPLICATE
- 5 = MEASURED VALUE OF FIFTH SPIKED REPLICATE
- 6 = MEASURED VALUE OF SIXTH SPIKED REPLICATE
- 7 = MEASURED VALUE OF SEVENTH SPIKED REPLICATE

M = MEDIA CODE (A ONE-LETTER CODE DESIGNATING THE MEDIA OF THE SAMPLE):

- A = AIR H = HAZARDOUS WASTE/OTHER
- S = SOLID (SOIL, SEDIMENT, SLUDGE)
- T = TISSUE (PLANT & ANIMAL)
- W = WATER (GROUND WATER, SURFACE WATER, WASTE WATER, DRINKING WATER)

DESCRIPTION = A SHORT DESCRIPTION OF THE LOCATION WHERE SAMPLE WAS COLLECTED

AIRS/STORET LOC. NO. = THE SPECIFIC LOCATION ID NUMBER OF EITHER OF THESE NATIONAL DATABASE SYSTEMS, AS APPROPRIATE

DATE/TIME INFORMATION = SPECIFIC INFORMATION REGARDING WHEN THE SAMPLE WAS COLLECTED

- BEG. DATE = DATE SAMPLING WAS STARTED
- BEG. TIME = TIME SAMPLING WAS STARTED
- END DATE = DATE SAMPLING WAS COMPLETED
- END TIME = TIME SAMPLING WAS COMPLETED
- NOTE: A GRAB SAMPLE WILL CONTAIN ONLY BEG. DATE/TIME
  A TIMED COMPOSITE SAMPLE WILL CONTAIN BOTH BEG AND END DATE/TIME TO DESIGNATE DURATION OF SAMPLE COLLECTION

OTHER CODES

- V = VALIDATED

ANALYTICAL RESULTS/MEASUREMENTS INFORMATION:

COMPOUND = MGP (MEDIA-GROUP-PARAMETER) CODE AND NAME OF THE MEASURED CONSTITUENT OR CHARACTERISTIC OF EACH SAMPLE

UNITS = SPECIFIC UNITS IN WHICH RESULTS ARE REPORTED:

- C = CENTIGRADE (CELSIUS) DEGREES
- CFS = CUBIC FEET PER SECOND
- GPM = GALLONS PER MINUTE
- IN = INCHES
- I.D. = SPECIES IDENTIFICATION
- KG = KILOGRAM
- L = LITER
- LB = POUNDS
- MG = MILLIGRAMS (1 X 10-3 GRAMS)
- MGD = MILLION GALLONS PER DAY
- MPH = MILES PER HOUR
- MV = MILLIVOLT
- M/F = MALE/FEMALE
- M2 = SQUARE METER
- M3 = CUBIC METER
- NA = NOT APPLICABLE
- NG = NANOGRAMS (1 X 10-9 GRAMS)
- NTU = NEPHELOMETRIC TURBIDITY UNITS
- PC/L = PICO (1 X 10-12) CURRIES PER LITER
- PG = PICOGRAMS (1 X 10-12 GRAMS)
- P/CM2 = PICOGRAMS PER SQUARE CENTIMETER
- SCM = STANDARD CUBIC METER (1 ATM, 25 C)
- SQ FT = SQUARE FEET
- SU = STANDARD UNITS (PH)
- UG = MICROGRAMS (1 X 10-6 GRAMS)
- UMHOS = MICROMHOS/CM (CONDUCTIVITY UNITS)
- U/CC2 = MICROGRAMS PER 100 SQUARE CENTIMETERS
- U/CM2 = MICROGRAMS PER SQUARE CENTIMETER
- 1000G = 1000 GALLONS
- +/- = POSITIVE/NEGATIVE
- # = NUMBER

DATA QUALIFIERS = SPECIFIC CODES USED IN CONJUNCTION WITH DATA VALUES TO PROVIDE ADDITIONAL INFORMATION ON THE REPORTED RESULTS, OR USED TO EXPLAIN THE ABSENCE OF A SPECIFIC VALUE:

- BLANK = IF FIELD IS BLANK, NO REMARKS OR QUALIFIERS ARE PERTINENT. FOR FINAL REPORTED DATA, THIS MEANS THAT THE VALUES HAVE BEEN REVIEWED AND FOUND TO BE ACCEPTABLE FOR USE.
- I = INVALID SAMPLE/DATA - VALUE NOT REPORTED
- J = DATA REPORTED BUT NOT VALID BY APPROVED QC PROCEDURES
- K = ACTUAL VALUE OF SAMPLE IS < VALUE REPORTED
- L = ACTUAL VALUE OF SAMPLE IS > VALUE REPORTED
- M = DETECTED BUT BELOW THE LEVEL OF REPORTED VALUE FOR ACCURATE QUANTIFICATION
- O = PARAMETER NOT ANALYZED
- U = ACTUAL VALUE OF SAMPLE IS < THE MEASUREMENT DETECTION LIMIT (REPORTED VALUE)

ANALYSIS REQUEST DETAIL REPORT ACTIVITY: 5-ADF13 VALIDATED DATA

COMPOUND	UNITS	001	001 D	002	003 F	004
WA03 1,1,2-TRICHLORO 1,2,2-TRIFLUOROETHANE	UG/L	4 U	4 U	4 U		
WM01 SILVER, TOTAL, BY ICAP	UG/L	7.88 U	7.88 U	496		7.88 U
WM06 CADMIUM, TOTAL, BY ICAP	UG/L	3.69 U	3.69 U	4.99		3.69 U
WM08 CHROMIUM, TOTAL, BY ICAP	UG/L	14.2 U	14.2 U	25.5		14.2 U
WM14 LEAD, TOTAL, BY ICAP	UG/L	25.1 U	25.1 U	25.1 U		25.1 U
WT09 CYANIDE, TOTAL	MG/L	0.004 U	0.004 U	0.480		
WV03 CHLOROMETHANE, BY GC/MS	UG/L				7 U	
WV04 BROMOMETHANE, BY GC/MS	UG/L				4 U	
WV05 VINYL CHLORIDE, BY GC/MS	UG/L				5 U	
WV06 CHLOROETHANE, BY GC/MS	UG/L				4 U	
WV07 METHYLENE CHLORIDE (DICHLOROMETHANE)	UG/L				12 U	
WV08 DICHLOROETHYLENE,1,1-	UG/L				4 U	
WV09 DICHLOROETHANE,1,1, BY GC/MS	UG/L				3 U	
WV11 CHLOROFORM, BY GC/MS	UG/L				4 U	
WV12 DICHLOROETHANE,1,2, BY GC/MS	UG/L				4 U	
WV13 TRICHLOROETHANE,1,1,1-, BY GC/MS	UG/L	4 U	4 U	4 U	4 U	
WV14 CARBON TETRACHLORIDE, BY GC/MS	UG/L				4 U	
WV15 BROMODICHLOROMETHANE, BY GC/MS	UG/L				4 U	
WV16 DICHLOROPROPANE,1,2, BY GC/MS	UG/L				4 U	
WV17 BENZENE, BY GC/MS	UG/L	4 U	4 U	4 U	4 U	
WV19 TRICHLOROETHYLENE	UG/L				4 U	
WV20 DICHLOROPROPYLENE,CIS-1,3, BY GC/MS	UG/L				5 U	
WV21 DIBROMOCHLOROMETHANE, BY GC/MS	UG/L				3 U	
WV22 TRICHLOROETHANE,1,1,2-, BY GC/MS	UG/L				4 U	
WV24 BROMOFORM, BY GC/MS	UG/L				3 U	
WV25 TETRACHLOROETHYLENE	UG/L				4 U	

ANALYSIS REQUEST DETAIL REPORT ACTIVITY: 5-ADF13 VALIDATED DATA

COMPOUND	UNITS	001	001 D	002	003 F	004
WV26 TOLUENE, BY GC/MS	UG/L	4 U	4 U	4 U	4 U	
WV27 TETRACHLOROETHANE,1,1,2,2, BY GC/MS	UG/L				4 U	
WV28 CHLOROBENZENE, BY GC/MS	UG/L				4 U	
WV29 ETHYL BENZENE, BY GC/MS	UG/L	4 U	4 U	4 U	4 U	
WV30 ACETONE, BY GC/MS	UG/L				9 U	
WV31 CARBON DISULFIDE, BY GC/MS	UG/L				3 U	
WV32 METHYL ETHYL KETONE (2-BUTANONE)	UG/L	15 U	15 U	15 U	15 U	
WV34 HEXANONE, 2-	UG/L				14 U	
WV35 4-METHYL-2-PENTANONE(MIBK)	UG/L	3 U	3 U	3 U	3 U	
WV36 STYRENE, BY GC/MS	UG/L				4 U	
WV37 XYLENES, TOTAL, BY GC/MS	UG/L	4 U	4 U	4 U		
WV40 DICHLOROPROPYLENE,TRANS-1,3	UG/L				3 U	
WV67 XYLENE, M AND/OR P	UG/L				4 U	
WV70 XYLENE, ORTHO	UG/L				4 U	
WV72 DICHLOROBENZENE,1,4-(PARA)	UG/L				5 U	
WV74 DICHLOROBENZENE,1,3-(META)	UG/L				4 U	
WV77 DICHLOROBENZENE,1,2-(ORTHO)	UG/L				4 U	
WV78 DICHLOROETHYLENE,TRANS-1,2	UG/L				3 U	
WV82 DICHLOROETHYLENE,CIS-1,2	UG/L				3 U	
ZZ01 SAMPLE NUMBER	NA	001	001	002	003	004
ZZ02 ACTIVITY CODE	NA	ADF13	ADF13	ADF13	ADF13	ADF13

ACTIVITY ADF13 GENERAL ELECTRIC CO.

THE PROJECT LEADER SHOULD CIRCLE ONE - STORET, AIRS, OR ARCHIVE.

CIRCLE ONE: STORET AIRS (ARCHIVE)

FINAL DATA REPORT APPROVED BY PROJECT LEADER ON 05/12/95 16:34:44 BY Robert B. Dorn.